**UNITED STATES DISTRICT COURT**
**DISTRICT OF MINNESOTA**

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| DANFOSS POWER SOLUTIONS INC., | Case No. 16-cv-3111 (NEB/DTS) |
| Plaintiff, | |
| v. | |
| DELTATECH CONTROLS, | REDACTED CLAIM CONSTRUCTION ORDER |
| Defendant. | |

This matter is before the Court for construction of certain terms found in U.S. Patent No. 7,456,828 ("the '828 patent") in accordance with *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 390–91 (1996). The parties prepared an amended joint claim construction statement, and each side submitted two briefs on claim construction issues. The Court held a claim construction hearing on December 20, 2018. [*See* ECF No. 125 ("Hr'g Tr.").]

## BACKGROUND

Plaintiff Danfoss Power Solutions Inc. ("Danfoss") brings this patent infringement suit against defendant DeltaTech Controls ("DeltaTech"), alleging infringement of the '828 patent. The patent covers a joystick device used to control heavy machinery and the like. [ECF No. 101-1 ('828 patent[1] Abstract).] The parties ask the Court to construe eight

[1] When quoting the '828 patent, this order does not include numbers that refer to the drawings except where necessary to avoid ambiguity.

of the patent's terms. [ECF No. 105 (Am. Joint Cl. Constr. Statement ("Cl. Constr. Stmt.")).]

**GENERAL PRINCIPLES**

Courts, rather than juries, are to construe patent claims. *Markman*, 517 U.S. at 391. In construing claims, courts give claims their ordinary and customary meaning, which is "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." *Phillips v. AWH Corp*., 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). "[B]ecause patentees frequently use terms idiosyncratically," courts look to intrinsic evidence, including "the words of the claims themselves, the remainder of the specification, [and] the prosecution history," as well as "extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art." *Id*. at 1314 (citations omitted). "[T]he claims themselves provide substantial guidance as to the meaning of particular claim terms," *id*., but they "do not stand alone." *Id*. at 1315. They are part of "'a fully integrated written instrument,' consisting principally of a specification that concludes with the claims," and must therefore "be read in view of the specification." *Id*. (citation omitted). The specification "is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." *Id*. (quoting *Vitronics Corp. v. Conceptronic, Inc*., 90 F.3d 1576, 1582 (Fed. Cir. 1996)). Courts may also consider the patent's prosecution history. *Id*. at 1317. "[L]ike the specification, the prosecution history provides evidence of how the

[United States Patent and Trademark Office ("PTO")] and the inventor understood the patent." *Id*. (citation omitted). The prosecution history may "inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." *Id*. (citations omitted). But "because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Id*. (citations omitted).

Extrinsic evidence consists of "all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Phillips*, 415 F.3d at 1317 (citations omitted). While extrinsic evidence "can shed useful light on the relevant art," it "is less significant than the intrinsic record in determining the legally operative meaning of disputed claim language." *C.R. Bard, Inc. v. U.S. Surgical Corp*., 388 F.3d 858, 862 (Fed. Cir. 2004) (quotation marks and citation omitted); *see Phillips*, 415 F.3d at 1317. Extrinsic evidence is viewed as "less reliable" than intrinsic evidence. *Phillips*, 415 F.3d at 1318.

## CLAIM CONSTRUCTION

### I. The Claims at Issue

The parties dispute the construction of the following claim terms: "main electronic controller," "control actuator," "in electronic communication with," "in electric communication with," "communicates with," "pivotally connected," "interconnect device," and "movement." Claims 1 and 7 contain the first seven disputed terms:

> 1. A joystick device *in electronic communication with* a remotely located *main electronic controller*, the joystick device comprising: a base assembly having a first microprocessor *in electronic communication with* the *main electronic controller*; a grip assembly *pivotally connected* to the base assembly; a second microprocessor disposed within the grip assembly; an *interconnect device in electric communication with* the first microprocessor; and wherein the first microprocessor *communicates with* the second microprocessor via the *interconnect device*.
>
> 7. A joystick device *in electronic communication with* a remotely located *control actuator*, the joystick device comprising: a base assembly having a first microprocessor *in electronic communication with* the *control actuator*; a grip assembly *pivotally connected* to the base assembly; and a second microprocessor disposed within the grip assembly and *in electronic communication with* the first microprocessor via an *interconnect device*.

('828 patent col. 3 ll. 30–col. 4 l. 2, col. 4 ll. 15–24 (emphasis added).) The term "movement" is found in Claims 4 and 10, which recite that the joystick device comprises "sensing elements for detecting *movement* of the joystick device." (*Id*. col. 4 ll. 8–9, 31–32 (emphasis added).) Claims 1 and 7 are independent claims. Claims 2–6 are dependent from Claim 1; Claims 8–12 are dependent from Claim 7.

### A. "main electronic controller"

The term "main electronic controller" is found in the preamble and the body of Claim 1: "A joystick device in electronic communication with a remotely located *main electronic controller*, the joystick device comprising: a base assembly having a first microprocessor in electronic communication with the *main electronic controller*…." (*Id*. col. 3 ll. 30–34 (emphasis added).) The parties dispute whether "main electronic controller" is a part of joystick device claimed, and request construction of this term as well.

#### 1. "main electronic controller" is a claim limitation

Danfoss argues that "main electronic controller" is not part of the claimed joystick device. In support, it relies on the language of the preamble of Claim 1 (the preamble consisting of everything in the claim preceding the word "comprising"). "A preamble is not a claim limitation if the claim body defines a structurally complete invention ... and uses the preamble only to state a purpose or intended use for the invention." *Georgetown Rail Equip. Co. v. Holland L.P.*, 867 F.3d 1229, 1236 (Fed. Cir. 2017) (quotation marks and citation omitted). "In general, a preamble limits the invention if it recites essential structure or steps, or if it is 'necessary to give life, meaning, and vitality' to the claim." *Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.,* 289 F.3d 801, 808 (Fed. Cir. 2002) (quoting *Pitney Bowes, Inc. v. Hewlett-Packard Co*., 182 F.3d 1298, 1305 (Fed. Cir. 1999)). "[D]ependence on a particular disputed preamble phrase for antecedent basis may limit

claim scope because it indicates a reliance on both the preamble and claim body to define the claimed invention." *Id*. (citing *Bell Comm. Research, Inc. v. Vitalink Comm. Corp.*, 55 F.3d 615, 620 (Fed. Cir. 1995) ("[W]hen the claim drafter chooses to use *both* the preamble and the body to define the subject matter of the claimed invention, the invention so defined, and not some other, is the one the patent protects.") (emphasis in original)).

Danfoss maintains that the phrase "the joystick device comprising" in the preamble indicates that the claims are directed to a joystick device, not the joystick device and the main electronic controller. Thus, the term "main electronic controller" in Claim 1 merely describes the principal intended use of the joystick device, and is not a claim limitation. *See Georgetown Rail*, 867 F.3d at 1236 (finding term in preamble was "meant to describe the principal intended use of the invention but not to import a structural limitation"). But the Federal Circuit has found that where "language appears in both the preamble and body" of a claim, "the applicants specifically included this language in the claim not once, but twice. By virtue of its inclusion in the body of [the claim], this phrase limits [the claim]." *Catalina Mktg.*, 289 F.3d at 811.

Here, "main electronic controller" is included in both the preamble and the body of Claim 1. Moreover, Claim 1 depends on the preamble phrase "a remotely located main electronic controller." The preamble phrase is necessary to understand the term "a main electronic controller" in the body of the claim. *See id*. at 808; *Pacing Techs., LLC v. Garmin Intern., Inc.*, 778 F.3d 1021, 1024 (Fed. Cir. 2015) (holding that the preamble to a claim was

limiting because "the preamble terms 'user' and 'repetitive motion pacing system' provide antecedent basis for and are necessary to understand positive limitations in the body of claims" where the claim body recited "the user" and "the repetitive motion pacing system"). For these reasons, the term "main electronic controller" is a claim limitation.

Danfoss argues that if the claim had required a main electronic controller, the patent examiner would have objected to the drawings of the device because they do not show a main electronic controller ('828 patent figs. 1–3). *See* 37 C.F.R. § 1.83(a) ("The drawing in a nonprovisional application must show every feature of the invention specified in the claims."). But drawings are not always required. 35 U.S.C. § 113 provides that the patent "applicant shall furnish a drawing *where necessary* for the understanding of the subject matter sought to be patented. When the nature of such subject matter admits of illustration by a drawing and the applicant has not furnished such a drawing, the Director *may* require its submission…." (emphasis added). The '828 patent specification purports to be an improvement over U.S. Pat. No. 6,550,562 to Brandt et al. ("Brandt").[2] ('828 patent col. 1 ll. 34–43 (explaining that Brandt "discloses a joystick controller….").) The patent examiner may not have required a drawing of the main electronic controller given the state of the prior art. [*See* ECF No. 108-3 at 8–18 ("Def.'s Ex.

[2] "[P]rior art cited in a patent or cited in the prosecution history of the patent constitutes intrinsic evidence." *Kumar v. Ovonic Battery Co., Inc.*, 351 F.3d 1364, 1368 (Fed. Cir. 2003) (citations omitted).

E") (Brandt patent figs. 1 & 2 (showing a main "controller 48" connected to "controller 47" within "hand grip 44")).] Thus, the lack of a figure showing a "main electronic controller" fails to persuade the Court that the "main electronic controller" is not a claim limitation.

**2. Construction of "main electronic controller"**

Danfoss argues that the term "main electronic controller" is clear and does not require construction. DeltaTech proposes a construction of the term as "a remotely located controller used to control a function of a piece of heavy machinery." (Cl. Const. Stmt. at 2.)

The first question is whether the term "main electronic controller" means "remotely located." Danfoss maintains that nothing in the term "the main electronic controller" in the body of Claim 1 specifies that it must be remote. But the term "a *remotely located* main electronic controller" in the preamble of Claim 1 provides an antecedent basis for "the main electronic controller" in the claim body. As noted above, "dependence on a particular disputed preamble phrase for antecedent basis may limit claim scope because it indicates a reliance on both the preamble and claim body to define the claimed invention." *Catalina Mktg.,* 289 F.3d at 808.

The intrinsic evidence also supports construing the main electronic controller as remotely located. A specification is limiting when "[e]very embodiment described in the specification … and every section of the specification" describes the invention one way.

*Poly-Am., L.P. v. API Indus., Inc.*, 839 F.3d 1131, 1137 (Fed. Cir. 2016), *cert. denied*, 137 S. Ct. 2267 (2017). The '828 patent Abstract recites, "[a] joystick device is provided that is in electronic communication with a *remotely located main electronic controller* used to control heavy machinery and the like." ('828 patent Abstract (emphasis added).) The Background of the Invention similarly describes "a *remotely located* main controller." (*Id.* col. 1 ll. 30–31 (emphasis added).) The specification further states that "[t]he present invention is directed towards a joystick device in electronic communication with a *remotely located* main electronic controller used to control heavy machinery and the like. The joystick device includes a base assembly having a first microprocessor in electronic communication with *the* main electronic controller." (*Id*. col. 1 ll. 56–61 (emphasis added).) It also repeatedly recites "the *remotely located* main controller." (*Id*. at 2 ll. 40–43, 50, 53, col. 3 ll. 4–5, 15–16, 28 (emphasis added); *see id*. at col. 2 ll. 51–53 ("Specifically, a cable (not shown) engages with the external interconnect device and connects the joystick device to the *remotely located* main controller.") (emphasis added).) The evidence is clear, and the Court therefore construes "main electronic controller" to be "remotely located."

The second question is whether, as DeltaTech urges, the term "main electronic controller" is limited to controlling "heavy machinery." The Court will not add this limitation, because nothing in Claim 1 limits "main electronic controller" to heavy machinery. While the Background of the Invention states that "[t]he present invention relates to control devices and, more specifically, joystick devices for controlling heavy

machinery," (*id*. col. 1 ll. 13–15), both the Abstract and the Summary of the Invention describe a "main electronic controller used to control heavy machinery *and the like*." (*Id*. Abstract, col. 1 ll. 57–59 (emphasis added).) The Description of the Invention also states that the joystick device "is used to control the movement of heavy machinery *and the like*." (*Id.* col. 2 ll. 55–56 (emphasis added).)[3] The inventor clearly contemplated that the main electronic controller could control something other than heavy machinery.

The Court therefore construes the term "main electronic controller" as "a remotely located controller configured to control functions of a machine."

**B. "control actuator"**

Like the term "main electronic controller" in Claim 1, the term "control actuator" is found in both the preamble and the body of Claim 7: "A joystick device in electronic communication with a remotely located *control actuator*, the joystick device comprising: a base assembly having a first microprocessor in electronic communication with the *control actuator*…." ('828 patent col. 4 ll. 15–19 (emphasis added).) Danfoss asserts that "control

[3] The specification also recites that "[t]he base assembly includes a mounting plate which permits that joystick device to be secured to any location desired by the operator," ('828 patent col. 2 ll. 31-33), which, according to Danfoss, indicates that "the claims are not to the heavy machinery, but to only the joystick device." [ECF No. 113 ("Pl.'s Reply Br.") at at 8 (citing *Georgetown Rail*, 867 F.3d at 1237 ("[T]he specification also uses the verb 'can be,' indicating an option rather than a requirement.").] The Court is not persuaded that this recitation supports Danfoss' position, but finds that the "main electronic controller" is not limited to controlling heavy machinery based on the other cited language in the specification.

actuator" be given the plain and ordinary meaning of a "device configured to receive a signal and convert it into mechanical motion."[4] (Cl. Constr. Stmt. at 13.) DeltaTech argues that "control actuator" should be construed as "a remotely located component used to control a function of a piece of heavy machinery." (*Id*. at 14.)

The specification supports the construction of "control actuator" as a device configured to receive a signal, and describes the main electronic controller "driv[ing]" control actuators. ('828 patent col. 2 ll. 41–45 (a microprocessor "transmits a single serial communication stream to the remotely located main electronic controller, which is used to drive control actuators (not shown)"); *see id.* col. 3 ll. 6–9 (stating that "the main controller controls and drives control actuators (not shown)").) Danfoss relies on dictionary definitions of "actuator" to argue that it is a well-known term in the art. The Electrical Engineering Dictionary defines "actuator" in part as "a device, usually mechanical in nature, that is controlled by a computer." [ECF No. 101-9 (ELECTRICAL ENGINEERING DICTIONARY (CRC Press LLC 2000).] Merriam-Webster's Collegiate Dictionary defines "actuator" in part as "a mechanical device for moving or controlling something." [ECF No. 101-8 (MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY (11th ed. 2003)).]

[4] Both parties summarily address the issue of whether "control actuator" is a claim limitation by referring to their arguments regarding the term "main electronic controller." Because "control actuator" is in both the preamble and body of Claim 7, it is a limitation of Claim 7. *See Catalina Mktg.*, 289 F.3d at 808.

DeltaTech does not dispute that the "control actuator" is a device configured to receive a signal and convert it into mechanical motion. Relying on its arguments regarding the term "main electronic controller," DeltaTech argues that a "remotely located" limitation be added to "control actuator." [ECF No. 106 ("Def.'s Resp. Br.") at 23–24.] Danfoss argues that "remotely" is not in the body of Claim 7, and similarly relies on its arguments addressing "main electronic controller." [ECF No. 99 ("Pl.'s Opening Br.") at 25; *see* Pl.'s Reply Br. at 23.] Like the term "main electronic controller" in Claim 1, the preamble of Claim 7 recites "a *remotely located* control actuator," and the claim body recites "*the* control actuator." ('828 patent col. 4 ll. 15–19 (emphasis added).) The Court finds that the preamble phrase "a remotely located control actuator" provides an antecedent basis for "the control actuator" in the body of Claim 7. *See Catalina Mktg.*, 289 F.3d at 808. Neither party offers other evidence as to whether the "control actuator" is "remotely located," or attempts to distinguish "main electronic controller" from "control actuator" on this issue.[5]

The Court also rejects DeltaTech's limitation of the term "control actuator" to heavy machinery. Nothing in Claim 7 limits "control actuator" to heavy machinery. Moreover, the specification states that the claimed joystick device "is used to control the movement of heavy machinery *and the like*." ('828 patent col. 2 ll. 55–56 (emphasis

[5] The Court notes that unlike "main electronic controller," the specification does not describe control actuators as remotely located, but repeatedly states that they are "(not shown)." (*See* '828 patent col. 2 ll. 43–44, col. 3 ll. 8, 16, 19.)

added).) Because the intrinsic evidence does not limit "control actuator" to heavy machinery, the Court declines to do so.

For these reasons, the Court construes the term "control actuator" as "a remotely located device used to receive a signal and convert it into mechanical motion."

### C. "in electronic communication with," "in electric communication with" and "communicates with"

The parties dispute the construction of the claim terms "in electronic communication with" and "in electric communication with."[6] Claims 1 and 7 teach "[a] joystick device *in electronic communication with* a remotely located main electronic controller [control actuator]," ('828 patent, col. 3 ll. 30–31 (preamble) (emphasis added), col. 4 ll. 15–16 (preamble) (emphasis added)), "a base assembly having a first microprocessor *in electronic communication with* the main electronic controller [control actuator]," (*id*. col. 3 ll. 33–34, col. 4 ll. 18–19 (emphasis added)), "an interconnect device *in electric communication with* the first microprocessor," (*id.* col. 3 ll. 38–39 (emphasis added)), "a first microprocessor *in electronic communication with* the control actuator," and "a second microprocessor … *in electronic communication with* the first microprocessor via an interconnect device." (*Id.* col. 4 ll. 18–19, 22–24 (emphasis added).)

[6] Like the parties, the Court assumes that "electronic" and "electric" are interchangeable for the purposes of claim construction. (*See* Cl. Constr. Stmt. at 4 n.1 (noting that neither the patent applicant nor the patent examiner distinguished between the scope of "electronic" and "electric" in the claims during prosecution).)

Claims 3 and 9 teach "[t]he joystick device of claim 1 [claim 7] further comprising input buttons on the grip assembly *in electronic communication with* the second microprocessor." (*Id.* col. 4 ll. 5–7, 27–29 (emphasis added).) Claims 6 and 12 teach "[t]he joystick device of claim 4 [claim 10] wherein the sensing elements are *in electronic communication with* the first microprocessor." (*Id.* col. 4 ll. 12–14, 35–37 (emphasis added).) The parties also dispute the construction of "communicates with" in Claim 1, which teaches "the first microprocessor *communicates with* the second microprocessor via an interconnect device." (*Id.* col. 4 ll. 1–2 (emphasis added).)

In the Joint Amended Claim Construction Statement, DeltaTech asserts that these claim terms are "indefinite as claiming both a product and a process[,] *IPXL Holdings, LLC v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed Cir. 2005)," but acknowledges that to the extent that the terms "are interpreted to present functional language that describes the capability of a structure, the claims are not indefinite under *MasterMine Software, Inc. v. Microsoft Corp.*, 874 F.3d 1307, 1315–16 (Fed. Cir. 2017)." (Cl. Const. Stmt. at 4–5.) DeltaTech does not actually argue these terms are indefinite under *IPXL Holdings*, but rather, proposes a construction of the terms under *MasterMine* that would allegedly save them from invalidity. (*See* Def.'s Resp. Br. at 17–19.) The Court assumes for the purposes of claim construction only that these terms "merely use permissible functional language to describe the capabilities of the claimed [device]," and thus, are not invalid as indefinite under *MasterMine*, 874 F.3d at 1316.

Both parties propose constructions of "in electronic [electric] communication with" and "communicates with" that include a form of "connected to." Danfoss maintains that "in electronic [electric] communication with" should be construed as "electronically [electrically] connected to," and that "communicates with" be construed as "connected to." (Cl. Constr. Stmt. at 3, 10, 12.) Danfoss also proposes that with respect to the first microprocessor being "in electronic communication with" the main electronic controller (or control actuator), "in electronic communication with" be construed as "*configured to be* electronically connected to" the main electronic controller (or control actuator). (*Id*. at 3–4 (emphasis added).) In contrast, DeltaTech proposes that all of these terms should be construed as "*presently* connected to be capable to transmit or otherwise share electronic information with." (*Id*. at 4–5, 12, 13 (emphasis added).) DeltaTech asserts that the term "communicates with" clearly requires a present connection between the two microprocessors, and that the Court should construe "in electronic [electric] communication with" consistently, and thus, requires a present connection for all of these terms.

Intrinsic and extrinsic evidence supports construing "in electronic [electric] communication with" as "electronically [electrically] connected to." The specification recites "input buttons *are electronically connected to* a microprocessor," and the microprocessor "sends a serial communication signal." ('828 patent col. 1 ll. 38–43 (emphasis added).) It also states, "[a]n external interconnect device … *is in electronic*

*communication with* the base microprocessor and the remotely located main controller. Specifically, a cable (not shown) *engages* with the external interconnect device and *connects* the joystick device to the remotely located main controller." (*Id.* col. 2 ll. 48–53 (emphasis added); s*ee id.* col. 3 ll. 12–15 (describing one embodiment as "the input buttons are *connected* directly to the base microprocessor, which receives inputs from the input buttons and sensing elements and transmits a single serial communication stream") (emphasis added).) Danfoss cites Webster's Dictionary, which defines "communicate" in part as "to be joined or connected," and "connect" in part as "to establish communication between." [ECF No. 101-3 (WEBSTER'S UNABRIDGED DICTIONARY (2d ed. 2001)).] Danfoss also relies on a declaration that DeltaTech submitted to the PTO in support of its petition for *inter partes* review ("IPR") of validity of the '828 patent in September 2017.[7] [*See* ECF No. 101-2 (Decl. of Richard Hooper, Ph.D., P.E. ("Hooper Decl.")).] In the declaration, Dr. Richard Hooper opined that "a microprocessor in the base assembly is, at least indirectly, 'in electronic communication with' or 'communicates with' a microprocessor in the grip assembly, in that they *are electrically or electronically connected* so that button information may be passed to the base microprocessor…." (*Id*. ¶ 57 (emphasis added).)

With respect to the first microprocessor being "in electronic communication with" the main electronic controller (or control actuator), the parties dispute whether "in

[7] The PTO denied the IPR petition in February 2018. [ECF No. 115-4 (*Sensata Techs. Inc. v. Danfoss Power Solutions, Inc.*, IPR2017-02069, Paper 8 ("PTO Paper 8") (P.T.A.B. Feb. 26, 2018).].

electronic communication with" requires that the components be "presently connected" or merely "configured to be" capable of being connected. In *MasterMine*, the Federal Circuit Court found that the claims at issue were not invalid for indefiniteness because they "merely claim that the system possess[es] the recited structure [which is] capable of performing the recited functions." 874 F.3d at 1316 (quotation marks and citation omitted). DeltaTech maintains that under *MasterMine*, the device elements as claimed must actually have the capability claimed, *i.e.*, they must actually be connected to the main electronic controller, at which time the joystick device becomes "capable" of the claimed communication functions. (Def.'s Resp. Br. at 18 (relying on *MasterMine*, 874 F.3d at 1315–16).) According to DeltaTech, Danfoss' proposed construction of "configured to be electronically [electrically] connected" is actually a construction that the first microprocessor is "capable of being capable of communicating signals." (*Id*.) Danfoss disagrees, insisting that *MasterMine* addressed active verbs "represent[ing] permissible functional language used to describe capabilities" of an element of a claim. 874 F.3d at 1315. In contrast, "in electronic [electric] communication with" does not include verbs, and describes a relationship between elements, rather than action.

The Court finds no need to construe "in electronic communication with" to include either "configured to be" or "presently." Danfoss proposed the "configured to be" construction in the context of a "first microprocessor in electronic communication with the main electronic controller [control actuator]" because it maintained that "main

electronic controller" and "control actuator" are not part of the joystick device, and thus, are not claim limitations. The Court has found that "main electronic controller" and "control actuator" are claim limitations. As such, the "configured to be" language is not necessary. To add "presently" electronically connected to would be redundant. The Court therefore construes the term "in electronic communication with" as "electronically connected to," the term "in electric communication with" as "electrically connected to," and the term "communicates with" as "connected to."

**D. "pivotally connected"**

Claims 1 and 7 teach "a grip assembly *pivotally connected* to the base assembly." ('828 patent col. 3 l. 35, col. 4 l. 20 (emphasis added).) Danfoss proposes that the term "pivotally connected" be construed as "connected to allow the grip assembly and base assembly to move relative to one another about a point, such as front to back and/or side to side, but not allowing rotation." (Cl. Constr. Stmt. at 6.) DeltaTech maintains that the evidence does not support the negative limitation of "not allowing rotation," and proposes that "pivotally connected" be construed as "connected to allow the grip assembly to pivot with respect to the base assembly." (*Id*. at 7.)

The inclusion of a negative limitation within a claim construction generally requires support from the intrinsic evidence. *See Santarus, Inc. v. Par Pharmaceutical, Inc*., 694 F.3d 1344, 1351 (Fed. Cir. 2012) ("Negative claim limitations are adequately supported when the specification describes a reason to exclude the relevant limitation.");

*Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003) (declining to add a negative limitation when there was no "express disclaimer or independent lexicography in the written description that would justify adding that negative limitation"). Danfoss does not cite to any disclaimer or disavowal in the intrinsic evidence. It relies on the Background of the Invention, which describes pivoting "from side to side and front to back," but this describes the Brandt joystick device, rather than the device at issue. (*See* Pl.'s Opening Br. at 18 (quoting '828 patent col. 1 ll. 34–35).) It also relies on the following sentence in the specification: "The flexible portion allows the grip assembly to pivot front to back and side to side with respect to the base assembly." (*See id*. (citing '828 patent col. 2 ll. 27–30).) While this statement describes front-to-back and side-to-side pivoting of the claimed device, nothing in the claims or specification prohibits rotation, or describes a reason to exclude rotation. *See Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, 632 F.3d 1246, 1254 (Fed. Cir. 2011) ("[E]ven where a patent describes only a single embodiment, claims will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words o[r] expressions of manifest exclusion or restriction."); *Prima Tek II v. Polypap*, 318 F.3d 1143, 1149 (Fed. Cir. 2003) ("limitations may not be read into the claims from the written description"). There is simply no support in the intrinsic record for Danfoss' proposed negative limitation.

Danfoss relies on extrinsic evidence from a representative of joystick customer Bobcat, Mr. Brady Bertsch. Danfoss asserts that Mr. Bertsch is a person of ordinary skill

in the art. (*See, e.g.*, Pl.'s Reply Br. at 11.) Mr. Bertsch testified that [redacted] Moreover, Mr. Bertsch was not opining on the meaning of the term "pivot." The Court finds that Mr. Bertsch's testimony is insufficient support for the negative limitation.

Danfoss cites *Mass Engineered Design, Inc. v. Ergotron, Inc.*, 559 F. Supp. 2d 740 (E.D. Tex. 2008), in support of the position that "pivotally connected" does not include rotation. In that patent infringement case, the parties disputed the meaning of "connected to" within the claim terms "pivotally connected to" and "rotatably connected to." *Id*. at 752. The parties did not offer competing constructions of the terms "pivotally" or "rotatably," so the court applied the plain and ordinary meaning of the terms. *Id*. The court construed "pivotally connected to" to mean "a connection between two bodies allowing the bodies to change positions relative to one another around or about at least one point," and "rotatably connected to" to mean "a connection between two bodies allowing the movement of the bodies relative to one another around or about an axis." *Id*. Because the parties did not offer competing constructions for the term "pivotally," *Mass Engineered* has limited persuasive value here. In sum, the Court finds that the extrinsic evidence does not support the negative limitation sought by Danfoss.

DeltaTech urges that "pivotally connected" be construed as "connected to allow the grip assembly to pivot with respect to the base assembly." It cites dictionary definitions of "pivot" in support of this plain and ordinary construction of "pivotally connected," including "a short rod or shaft on which a related part rotates or swings," and "to cause to rotate, revolve, or turn." (Def.'s Resp. Br. at 28 (citing THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE (3d ed. 1996)).)[8] The Court agrees and construes the term "pivotally connected" as "connected to allow the grip assembly to pivot with respect to the base assembly."

**E. "interconnect device"**

The parties dispute the construction of the term "interconnect device" in Claims 1 and 7, which teach "an *interconnect device* in electric communication with the first microprocessor," ('828 patent col. 3 ll. 38–39 (emphasis added)), "the first microprocessor communicates with the second microprocessor via the *interconnect device*," (*id.* col. 4 ll. 1–2 (emphasis added)), and "a second microprocessor … in electronic communication with the first microprocessor via an *interconnect device*." (*Id.* col. 4 ll. 22–24 (emphasis added).)

[8] In its response brief, DeltaTech cites several similar definitions of the noun "pivot" including, "a short pointed shaft forming the center and fulcrum on which something turns, balances or oscillates," and "a short shaft or pin on which something turns or oscillates." (Def.'s Resp. Br. at 28 (citing MCGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS (6th ed. 2002), and THE CONCISE OXFORD DICTIONARY OF CURRENT ENGLISH (9th ed. 1995)).) It also notes that the verb "pivot" has been defined as "the action of turning about, oscillating, or balancing on or as if on a pivot." (*Id*. citing (WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY OF THE ENGLISH LANGUAGE, UNABRIDGED (2002)).)

Danfoss proposes the plain and ordinary meaning of "interconnect device" be given, which is "a device that is configured to electrically or electronically connect or facilitate an electric or electronic connection between two or more components." (Cl. Constr. Stmt. at 8.) In support of this construction, Danfoss points to the specification's description of the "interconnect device" as being "in electronic communication with input buttons" and receiving "a single serial communication stream" from a microprocessor, ('828 patent col. 2 ll. 19–24), as well as statements that "[t]he microprocessor is in electronic communication with the grip microprocessor via the interconnect device." (*Id.* col. 2 ll. 38–41; *see id.* col. 2 ll. 61–63, 66–col. 3 l. 3.) Danfoss further supports its position by relying on a dictionary definition of "interconnect" as "connect with each other." [ECF No. 101-7 (CONCISE OXFORD ENGLISH DICTIONARY (11th ed. 2004).]

Danfoss also relies on the PTO's finding that the term "interconnect device" was "sufficiently clear" in its denial of DeltaTech's IPR petition.[9] (PTO Paper 8 at 14.) Danfoss

[9] Danfoss contends that the IPR proceeding is part of the prosecution history, and thus is intrinsic evidence. In support, it cites *Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353 (Fed. Cir. 2017), which provides that "statements made by *a patent owner* during an IPR proceeding can be considered during claim construction and relied upon to support a finding of prosecution disclaimer." *Id*. at 1361 (emphasis added). Here, in contrast, Danfoss relies on statements made by DeltaTech's declarant in support of the IPR petition, and the PTO's decision to deny the IPR petition. Courts vary as to whether the PTO's Patent Trial and Appeal Board ("PTAB") claim construction decisions in IPR proceedings are considered intrinsic or extrinsic evidence. *Compare Depuy Orthopaedics, Inc. v. Orthopaedic Hosp.*, No. 3:12-CV-299-CAN, 2016 WL 96164, at *5 (N.D. Ind. Jan. 8, 2016) ("Extrinsic evidence may include a PTAB decision regarding IPR, but the court 'owes no deference to the PTAB's claim construction done as part of an *inter partes* review.'") (quoting *Pragmatus AV, LLC v. Yahoo! Inc.*, No. C-13-1176 EMC, 2014 WL

maintains that, like this Court, the PTO was required to construe the terms in light of the specification. DeltaTech contends that the Court should disregard this evidence because the parties did not litigate the issue of the interconnect device in the IPR proceeding. (Hr'g Tr. at 42.) Moreover, at the time of the PTO's decision, the IPR process applied a more lenient, "broadest reasonable" construction standard. *See* 37 C.F.R. § 42.100 (eff. through 5/1/2016 and 11/12/2018) ("A claim in an unexpired patent that will not expire before a final written decision is issued shall be given its broadest reasonable construction in light of the specification of the patent in which it appears…."). Given that the PTO provides no insight into its determination that the term "interconnect device" was "sufficiently clear," the Court finds the PTO's decision to be of limited value.

DeltaTech argues that the proper scope of the term "interconnect device" is ambiguous based on '828 patent's prosecution history, specification, and figures. (Cl. Constr. Stmt. at 9.) It contends that Danfoss' statements in the prosecution history and specification render the term "interconnect device" indefinite (and therefore invalid)

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1922081, at *4 (N.D. Cal. May 13, 2014)), *with Fairfield Indus., Inc. v. Wireless Seismic, Inc.*, No. 4:14–CV–2972, 2015 WL 1034275, at *5 (S.D. Tex. Mar. 10, 2015) ("The prosecution history of the patents-in-suit also bolsters Fairfield's construction.... Although PTAB applies a different construction standard than the district courts do, its claim construction analysis serves as further intrinsic evidence that Fairfield's proposed construction is appropriate."). Regardless, the Court is not bound by the PTO's construction of claim terms. *See SRAM Corp. v. AD–II Eng'g Inc.*, 465 F.3d 1351, 1359 (Fed. Cir. 2006) (in case decided before America Invents Act went into effect, stating that "this court is not bound by the PTO's claim interpretation [in IPR proceedings] because we review claim construction *de novo*").

unless it is limited to the sole embodiment, *i.e.,* the way it is shown in Figure 1. To avoid indefiniteness, DeltaTech proposes that "interconnect device" be construed as "a serial communication line *running through the pivotal connection*." (*Id*. at 10 (emphasis added).)

"Indefiniteness ... is a question of law" governed by "the same principles that generally govern claim construction." *Praxair, Inc. v. ATMI, Inc*., 543 F.3d 1306, 1319 (Fed. Cir. 2008). "[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc. v. Biosig Instruments, Inc*., 572 U.S. 898, 901 (2014). A claim "is indefinite if its language 'might mean several different things and no informed and confident choice is available among the contending definitions.'" *Media Rights Techs., Inc. v. Capital One Fin. Corp*., 800 F.3d 1366, 1371 (Fed Cir. 2015) (quoting *Nautilus*, 572 U.S. at 911 n.8). The party challenging a patent bears the burden to prove invalidity by "clear and convincing evidence." *Microsoft Corp. v. i4i Ltd. P'ship*, 564 U.S. 91, 95 (2011).

**Prosecution History**. DeltaTech maintains that Danfoss disavowed a broader claim scope of "interconnect device" during the prosecution of the '828 patent. Courts depart from the plain and ordinary meaning of a term "when the patentee disavows the full scope of the claim term in the specification or during prosecution." *Poly-Am*., 839 F.3d at 1136 (citation omitted). "While disavowal must be clear and unequivocal, it need not be explicit." *Id*. (citation omitted). "The standard for disavowal is exacting, requiring clear

and unequivocal evidence that the claimed invention includes or does not include a particular feature. Ambiguous language cannot support disavowal." *Cisco Sys., Inc. v. Int'l Trade Comm'n*, 873 F.3d 1354, 1361 (Fed. Cir. 2017) (citing *Poly-Am.*, 839 F.3d at 1136).

To understand the parties' arguments, it is helpful to consider the evolution of Claim 1 during the patent prosecution:

> 1. A joystick device in electronic communication with a remotely located main electronic controller, the joystick device comprising:
> a base assembly having a first microprocessor in electronic communication with the main electronic controller; ~~and~~ a grip assembly pivotally connected to the base assembly~~.~~;
> 2. ~~The joystick device of claim 1 further comprising~~ a second microprocessor disposed within the grip assembly ~~and~~; an interconnect device in electr~~on~~ic communication with the first microprocessor; and wherein the first microprocessor communicates with the second microprocessor via the interconnect device.

[ECF Nos. 108-1–108-2 ("Def.'s Ex. C") at DAN 96, 219 (strikethrough text shows original language deleted during patent prosecution; underlined text shows language added to Claim 1 and approved by the patent examiner).] The original claim 1 was directed to a single base microprocessor. (*Id*. at DAN 219.) The original claim 2 introduced a second microprocessor "in electronic communication with the first microprocessor." (*Id*.) During the patent prosecution, the examiner rejected the original claims over prior art of Brandt[10]

[10] The Brandt patent describes a "control system [that] controls actuation of a hydraulic cylinder on a skid steer loader," with a grip microprocessor. (Def.'s Ex. E (U.S. Patent No. 6,550,562 B2, Abstract).)

and Rosenberg, Louis B. ("Rosenberg").[11] (*Id*. at DAN 109–13.) Brandt teaches a grip microprocessor with a connection to a main controller, and Rosenberg teaches a base microprocessor with a connection to a main controller. (*See id*. at DAN 112–14.) The examiner found that "it would be obvious as to multiple microprocessor [*sic*] electronically communicate with each other." (*Id*. at DAN 112.) In response to the examiner's rejection, Danfoss distinguished Brandt and Rosenberg by combining original claims 1 and 2 and adding the electronic communication by way of an "interconnect device." (*See id*. at DAN 96, 99–100.)

The examiner approved the amended claims, and thus, DeltaTech maintains that the "interconnect device" must be something more than just any physical electrical connection, because that was found to exist in the combination of Brandt and Rosenberg. DeltaTech notes that Danfoss distinguished Brandt and Rosenberg by asserting that "neither Rosenberg nor Brandt teaches an interconnect device." (Def.'s Ex. C at DAN 100 (addressing later-cancelled Claim 15).) Yet it argues that an "interconnect device" must be more than just "a wire" because both Brandt and Rosenberg teach electrical connections, including electrical wires. [ECF No. 118 ("Def.'s Surreply Br.") at 8; *see* Def.'s

[11] The Rosenberg patent application describes "computer interface devices that allow the user to provide input to computer systems and allow computer systems to provide force feedback to the user." [ECF No. 108-3 at 53 (U.S. Patent App. No. US 2002/0097223 A1, ¶ 1).] Common user "interface devices" include a joystick. (*Id*., ¶ 2.)

Resp. Br. at 11.] DeltaTech maintains that because the term "interconnect device" is unclear, it must be indefinite.

Danfoss insists that it did not distinguish an "interconnect device" from Brandt and Rosenberg; rather, it distinguished an interconnect device *between two microprocessors* in the base and grip, which neither Brandt nor Rosenberg had. During the patent prosecution, Danfoss explained: "Brandt does not cure Rosenberg as Brandt also does not teach an interconnect device that allows the first microprocessor to communicate with a second microprocessor," and "neither reference teaches an interconnect device that provides an electric communication between a first microprocessor in a base assembly and a second microprocessor in a grip assembly." (Def.'s Ex. C. at DAN 99 (addressing multiple claims).) Danfoss requested that the examiner's "anticipation rejection" be withdrawn "[b]ecause a combination of Rosenberg and Brandt would not result in a device having all the limitations of amended claim 1." (Def.'s Ex. C at DAN 99–100.) Danfoss continued: "neither Rosenberg nor Brant teach an interconnect device that causes a second microprocessor disposed in a grip to be in electrical communication with a first microprocessor located in a base assembly." (*Id*. at DAN 100.) Danfoss thus distinguished the Brandt and Rosenberg combination by including an interconnect device between the two microprocessors.[12]

[12] At the hearing, Danfoss explained that during the patent prosecution, it argued "that Brandt and Rosenberg do not teach two microprocessors with an interconnect connecting the two. Each one of them teaches one microprocessor, but there's nothing that teaches

In addressing the later-cancelled Claim 15, Danfoss stated, "[a]gain, neither Rosenberg nor Brandt teaches an interconnect device." (*Id*.) Claim 15 taught a single microprocessor, rather than two microprocessors.[13] (*See id*. at DAN 98.) DeltaTech contends that because Claim 15 had only one microprocessor, Danfoss' statements regarding communication between two microprocessors are inapposite to Claim 15. DeltaTech maintains that, reading the prosecution history consistently, Danfoss argued that neither Brandt and Rosenberg has an interconnect device in either a single or double microprocessor configuration, and in doing so, clearly and unmistakably disavowed claim scope.

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two microprocessors with a connection between them…. The argument that was made was Brandt and Rosenberg each teach one microprocessor. There is nothing that teaches an interconnect device connecting two microprocessors, one in the grip, and one in the base." (Hr'g Tr. at 28.) According to Danfoss, the patent examiner's finding regarding the Brandt and Rosenberg combination resulted in a joystick with two microprocessors with connections to the main electronic controller, but that the two microprocessors "might not be" connected; "if you combine those two references [Brandt and Rosenberg], there is no connection between those two. That's not taught." (*Id*. at 65.)

[13] At the time Danfoss made this statement, Claim 15 recited:

> A joystick device in electric communication with a remotely located main electronic controller, the joystick device comprising: a base assembly having a first microprocessor in electronic communication with the main electronic controller; a grip assembly pivotally connected to the base assembly; sensing elements disposed within the base assembly for detecting movement of the joystick device as the grip assembly pivots about the base assembly; an interconnect device in electric communication with the first microprocessor; and wherein the first microprocessor receives signals from the sensing elements and a serial communication stream from the interconnect device to process an output signal.

(Def.'s Ex. C at DAN 98.)

But DeltaTech relies on a single statement made by Danfoss as to a subsequently-cancelled claim, and discounts multiple statements as to approved claims that clearly distinguish Brant and Rosenberg based on the interconnect device between two microprocessors. DeltaTech has not met the exacting standard required to prove disavowal. *See Cisco Sys.*, 873 F.3d at 1361. The Court finds that Danfoss' statements, taken together, do not amount to "clear and unequivocal" evidence proving disavowal. *See id.* (citing *Poly-Am.*, 839 F.3d at 1136).

**Specification**. DeltaTech argues that independent of the prosecution history, Danfoss disavowed a broader construction of "interconnect device" in the specification. (*See* Def.'s Surreply Br. at 10.) "To disavow claim scope, the specification must contain 'expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.'" *Retractable Techs., Inc. v. Becton, Dickinson and Co.*, 653 F.3d 1296, 1306 (Fed. Cir. 2011) (quoting *Epistar Corp. v. Int'l Trade Comm'n*, 566 F.3d 1321, 1335 (Fed. Cir. 2009)). "[A]n inventor may disavow claims lacking a particular feature when the specification describes 'the present invention' as having that feature." *Poly-Am.*, 839 F.3d at 1136 (citation omitted).

DeltaTech maintains that the "interconnect device" should be construed as running through the pivotal connection because (1) Figure 1 shows the "interconnect device" running through the pivotal connection, and (2) the specification describes Figure 1 as "a perspective view of the joystick device of *the present invention*." ('828 patent

col. 2 ll. 3–4 (emphasis added).) But "the mere fact that the patent drawings depict a particular embodiment of the patent does not operate to limit the claims to that specific configuration." *Prima Tek II,* 318 F.3d at 1149.

DeltaTech relies on *Poly-America, L.P. v. API Industries, Inc.*, 839 F.3d 1131 (Fed. Cir. 2016), an infringement action related to a patent for an improved construction of an elastic drawstring trash bag. There, the specification recited: "[i]n looking at both FIG. 1 and FIG 2, it is important to note that one of the characteristics of *the present invention* is a reduction in upper width ... resulting from the extended short seals." *Id*. at 1136 (emphasis added). The Federal Circuit found that "[d]irecting the reader to figures one and two, which demonstrate the extended short seal feature, does not limit the import of this clear statement that describes a characteristic feature of the invention." *Id*. It held the fact that (1) "[e]very embodiment described in the specification" showed this feature of the invention, and (2) "every section of the specification indicate[d] the importance of" this feature, "provide together a proper reason to limit the claims in this way." *Id*. at 1137. Even if they did not, the specification and statements from the prosecution history taken together "provide[d] clear and unequivocal evidence that the inventor intended to disavow any claim scope encompassing short seals that are not inwardly extended," *i.e.*, not encompassing the characteristic feature of the invention. *Id*. More recently, the Federal Circuit explained:

> While descriptions "of the 'present invention' as a whole" could limit the scope of the invention, *see Verizon Servs. Corp. v. Vonage Holdings Corp*., 503 F.3d 1295, 1308 (Fed. Cir. 2007), "use of the phrase 'present invention' or 'this invention' is not always so limiting, such as where the references … are not uniform, or where other portions of the intrinsic evidence do not support applying the limitation to the entire patent," *Absolute Software, Inc. v. Stealth Signal, Inc*., 659 F.3d 1121, 1136–37 (Fed. Cir. 2011).

*Cont'l Circuits LLC v. Intel Corp.*, No. 2018-1076, 2019 WL 489069, at *7 (Fed. Cir. Feb. 08, 2019) (finding that statements in the specification addressing "the present invention" did "not characterize the present invention 'as a whole,'" but rather "disclose[d] one way to carry out the present invention … and references to 'the present invention' occur within this context").

The Court has reviewed Figure 1 and the "present invention" statement in the specification relied upon by DeltaTech, and finds that they do not rise to the level of "a clear and unmistakable disclaimer." *Id.* at *6 (quoting *Thorner v. Sony Comput. Entm't Am. LLC*, 669 F.3d 1362, 1367 (Fed. Cir. 2012)). The specification never states that the interconnect device runs through the pivotal connection, and does not distinguish prior art having an interconnect device not running through a pivotal connection. Neither the claims nor the specification demonstrate a clear intention to limit the claim scope of the interconnect device to running through the pivotal connection, or describe any advantages of doing so. The Federal Circuit has "expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment." *Id.* (quoting *Phillips*, 415 F.3d at 1323); *see Liebel-*

*Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) ("Even when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using 'words or expressions of manifest exclusion or restriction.'")).

Moreover, Dr. Hooper's declaration in support of DeltaTech's IPR petition states that "the only requirement for the 'interconnect device 20' in the '828 Patent specification is that it receives a serial communication stream from the grip microprocessor 18 (2:23–24) and is a conduit ('via') part of the 'electronic communication' between the microprocessors (2:38–40)." (Hooper Decl. ¶ 65.) Dr. Hooper does not discuss the "interconnect device" as running through the pivotal connection, indicating that one of ordinary skill in the art would not interpret the "interconnect device" to run through the pivotal connection.

**Indefiniteness**. DeltaTech asserts that the term "interconnect device" is indefinite for the reasons discussed above, and thus, to preserve the validity of the '828 patent, the Court should construe the term "interconnect device" based on what is disclosed in the patent specification and Figure 1.[14] "If, after applying all other available tools of claim

[14] "[I]ndefiniteness is a question of law and in effect part of claim construction." *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 517 (Fed. Cir. 2012); *see Cox Communs., Inc. v. Sprint Commun. Co. LP*, 838 F.3d 1224, 1232 (Fed. Cir. 2016) ("[A]n indefiniteness analysis under 35 U.S.C. § 112, ¶ 2 is 'inextricably intertwined with claim construction.'"). In some circumstances, courts decline to resolve questions of indefiniteness at the claim construction stage of litigation, deferring them until summary judgment when a fuller record is available. *See, e.g., MedIdea, L.L.C. v. DePuy Orthopaedics, Inc.*, No. CV 17-11172-

construction, a claim is ambiguous, it should be construed to preserve its validity." *Ruckus Wireless, Inc. v. Innovative Wireless Sols., LLC*, 824 F.3d 999, 1004 (Fed. Cir. 2016)); *see Phillips*, 415 F.3d at 1327 ("limit[ing] the maxim [to preserve the validity of claims] to cases in which the court concludes, after applying all the available tools of claim construction, that the claim is still ambiguous") (quotation marks and citations omitted).

The Court construes "interconnect device" as "a device that is configured to electrically or electronically connect or facilitate an electric or electronic connection between two or more components." While this term may be broad, "breadth is not indefiniteness." *BASF Corp. v. Johnson Matthey Inc*., 875 F.3d 1360, 1367 (Fed. Cir. 2017) (citation omitted). For the reasons above, DeltaTech has failed to show by clear and convincing evidence that "interconnect device" is indefinite. The Court does not, however, preclude DeltaTech from raising an indefiniteness argument in an appropriate motion for summary judgment.[15]

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LTS, 2018 WL 5830849, at *10 (D. Mass. Nov. 7, 2018)*; Indus. Tech. Research Inst. v. LG Elecs. Inc*., No. 3:13-CV-02016-GPC, 2014 WL 6907449, at *3 (S.D. Cal. Dec. 8, 2014); *Int'l Dev. LLC v. Richmond*, No. 09-2495-GEB, 2010 WL 4703779, at *6–7 (D.N.J. Nov. 12, 2010). Danfoss has indicated that the issue of indefiniteness was a more of an issue for summary judgment, and DeltaTech did not object. (Hr'g Tr. at 50, 65, 68.)

[15] DeltaTech also argues that Danfoss' position is inequitable because Danfoss prosecuted a similar joystick patent. This argument is better suited for a motion for summary judgment than an analysis of claim construction.

**F. "movement"**

Claims 4 and 10 provide that the joystick device comprises "sensing elements for detecting *movement* of the joystick device." ('828 patent col. 4 ll. 8–9, 31–32 (emphasis added).) Danfoss proposes "movement" be construed as "the pivotal movement of the grip assembly." (Cl. Constr. Stmt. at 14.) DeltaTech maintains that the term requires no construction. (*Id*. at 15.) While nothing in the claim limits "movement" to pivotal movement, the specification recites "[s]ensing elements detect movement of the grip assembly as it pivots about the base assembly." ('828 patent col. 2 ll. 35–36.)

DeltaTech argues against construing "movement" as "pivotal movement" because at the time Danfoss prosecuted the '828 patent, it knew how to claim "pivotal movement." It points to another patent for a joystick device that Danfoss prosecuted at the same time as the '828 patent, which was eventually issued as U.S. Patent No. 7,757,579 ("'579 patent"). [ECF No. 108-6.] The '579 patent does not recite "movement," but does use "pivotal" language, teaching "[a] joystick device, comprising: a grip assembly pivotably connected to a base assembly; sensing elements disposed within the base assembly that detect position of the grip assembly as it pivots about the base assembly." (*Id*. col. 5 ll. 48–52.) According to DeltaTech, this language indicates that Danfoss knew how to claim "pivotal movement," as opposed to just movement. Danfoss responds, correctly, that the

'579 patent is not related to the '828 patent, and thus is extrinsic evidence.[16] *See Abbott Labs. v. Dey, L.P.*, 287 F.3d 1097, 1105 (Fed. Cir. 2002) (in the context of estoppel, explaining that "we do not see a basis for concluding that statements made about the characteristics of the surfactant claimed by the '301 patent should be attributed to the improved surfactant claimed by the '839 patent, simply because the applications had a common assignee, one common inventor, and similar subject matter").

During the hearing, DeltaTech noted that in the prosecution of the '828 patent, the original Claim 15 recited "sensing elements disposed within the base assembly for detecting movement of the joystick device as the grip assembly pivots about the base assembly." (Def.'s Ex. C at DAN 130.) DeltaTech argues that because two claims of a patent are presumptively different in scope, Danfoss' proposed construction of "movement" as "pivotal movement" is an attempt to make Claim 6 the same as the original Claim 15. (Hr'g Tr. at 55); *see Andersen Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1369 (Fed Cir. 2007) ("[D]ifferent words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope."). Danfoss allegedly did not intend to limit "movement" to "pivotal movement" in Claim 6, because it did so in Claim 15. (*See* Hr'g Tr. at 56.) DeltaTech acknowledges that Claim 15 was

[16] While DeltaTech initially characterized the '579 patent as "related" to the '828 patent, (Def.'s Resp. Br. at 30), it is undisputed that the '828 patent and the '579 patent are not related in the sense used by the PTO to refer to a continuation, continuation-in-part, or divisional application. (Def.'s Surreply Br. at 15 n.10.)

cancelled, but "cancelled claims may provide 'probative evidence' that an embodiment is not within the scope of an asserted claim." *PSN Illinois, LLC v. Ivoclar Vivadent, Inc.*, 525 F.3d 1159, 1166 (Fed. Cir. 2008); *see Good Tech. Corp. v. Little Red Wagon Techs., Inc.*, No. 3:11-CV-02373-M, 2013 WL 4052408, at *7 (N.D. Tex. Aug. 11, 2013) ("Absent evidence that the PTO cancelled the dependent claim because it did not add anything to the independent claim, … the original claim structure offers guidance as to how the inventor understood his patent, and how it would be understood by someone with ordinary skill in the art.") (citing *PSN Illinois*, 525 F.3d at 1166).

Danfoss maintains that to the extent that the cancelled Claim 15 refers to sensing elements to detect movement, the "movement" is consistent with Danfoss' proposed construction as well as the specification, *i.e.*, it describes the grip pivoting relative to the base. (Hr'g Tr. at 62–63 (citing '828 patent col. 2 ll. 27–30).) The Court disagrees with and rejects Danfoss' proposed construction of "movement" because it is similar to the language of Claim 15. Its use of different phrases in Claim 1 and Claim 15 indicate that these claims have different meaning and scope.

The Court finds that the term "movement" needs no construction. This term has a plain and ordinary meaning, and is used repeatedly in the specification. In addition to the specification reciting "[s]ensing elements detect *movement* of the grip assembly as it pivots about the base assembly," ('828 patent col. 2 ll. 35–36 (emphasis added)), it also recites "sensing elements for detecting *movement* of the joystick device," (*id*. col. 1 ll. 65–

67 (emphasis added)), "the joystick device … is used to control the *movement* of heavy machinery and the like," (*id*. col. 2 ll. 54–56 (emphasis added)), and "[t]he operator grasps the joystick device and affects the *movement* of the heavy machinery." (*Id*. col. 2 ll. 56–58 (emphasis added).) "Varied use of a disputed term in the written description demonstrates the breadth of the term rather than providing a limited definition." *Prima Tek II*, 318 F.3d at 1151. The specification indicates that Danfoss intended the term "movement" to have its plain and ordinary meaning; paraphrasing or restating that ordinary meaning of this term would not be helpful.

Finally, the Court disagrees with DeltaTech that "movement" is indefinite. Claims 4 and 10 teach "sensing elements for detecting movement of the joystick device." ('828 patent col. 4 ll. 8–9, 31–32.) "The joystick device" is comprised of the grip and the base, with the base generally being stationary and the grip moving with respect to the base. (*See id.* col. 3 ll. 33–35.) Because movement of the entire joystick device differs from movement of the grip relative to the base, DeltaTech maintains that "movement" is ill defined and arguably indefinite. But DeltaTech fails to show by clear and convincing evidence that "movement" is indefinite. The Court does not, however, preclude DeltaTech from raising an indefiniteness argument in an appropriate motion for summary judgment.

## CONCLUSION

In light of the '828 Patent's specification (including the claims), the purpose of the patent as disclosed in the intrinsic evidence, the ordinary meaning of the claim language, relevant extrinsic evidence, and the parties' arguments, the Court construes the disputed claim language as stated above.

Dated: April 8, 2019

BY THE COURT:

s/Nancy E. Brasel
Nancy E. Brasel
United States District Judge